

# **DIGITAL POWER AND SWR METER**

## **TESTING AND ALIGNMENT PROCEDURES**

### **SWR BRIDGE TUNING**

1. Turn trimmers RV1, RV2, RV3 & RV4 to its maximum (clockwise).
2. Connect transceiver to ANT connector and the antenna to RTX connector (reverse connection). Transceiver power should be 4 watts. Load equals 50 ohms.
3. Transmit and adjust RV6 to have the power reading at minimum (0.00).
4. Reverse the antenna and transceiver connection. (normal connection).
5. Transmit and adjust RV5 to have the SWR reading at minimum (1.0).

### **POWER AND SWR CALIBRATION**

1. Set transceiver at high power (50W).
2. Transmit and adjust RV4 to set the power reading at high level (50W). Vary the power (150W - 10W) and check accuracy.
3. Set transceiver at low power (2W).
4. Transmit and adjust RV3 to set power reading at low level (2W). Vary the power (10W-0.5W) and check accuracy.
5. Change the load to a high impedance mismatch (100 Ohms, SWR=2.0).
6. Transmit at high power (50W) and calibrate SWR reading to 2.0 by tuning RV1.
7. Transmit at low power (2W) and calibrate SWR reading to 2.0 by tuning RV2.
8. Change the load to a low impedance mismatch (25 Ohms, SWR=2.0).
9. Transmit and check to have a near SWR reading of 2.0.  
If not, fine tune the low impedance / high impedance SWR balance by slightly turning RV5 and re-adjusting RV2.
10. Change load to 50 ohms and check the SWR reading, should be 1.0.